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COMMUNICATIONS

THE LAURENCE-MOON-BIEDL SYNDROME—RECORD OF A CASE

BY

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THE following isolated case is submitted because of the rarity of the syndrome, and because it happens to show all the defects observed in previous cases along with several minor interesting features. I first saw the patient in June, 1936, and when I read an article* on "Obesity, Hypogenitalism, Mental retardation, Polydactyly, and Retinal pigmentation (The Laurence-Moon-Biedl Syndrome)" I realised that I had stumbled on a case showing the complete syndrome.

Family History.—The patient's mother, the second eldest of a family of twelve, is alive and healthy, and has no abnormalities. Of this family three males and one female are living. James, now aged 56 years (X on chart) has very defective vision. He has been seen by an ophthalmic surgeon, who diagnosed retinal degeneration and optic atrophy. He is able to herd cattle on a farm, but he is unable to read. He is not very bright mentally, but is not obese. There is no polydactyly. The condition of the

*A description, history and bibliography of the syndrome may be found in the admirable article by Cockayne, Krestin and Sorsby in the *Quarterly Journal of Medicine*, April, 1935.

genital organs is unknown; he is unmarried. The seventh member of the family is alive, a healthy woman with no known abnormality. The second youngest male lives in South Africa. He is unmarried, and has no known abnormality. Fred., aged 43 years (Y on chart) has retinal degeneration and nearly complete optic atrophy. He can walk about the farm alone, but is unable to see people. He is quite sound mentally, is not obese

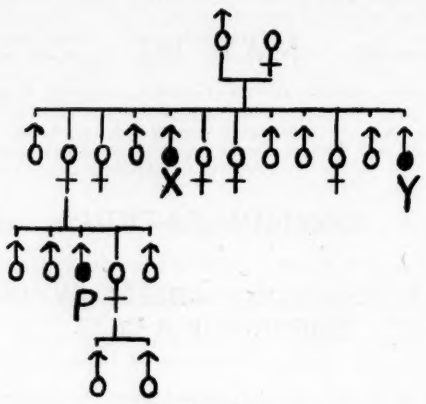


FIG. 1.

Chart of Pedigree. (X) (Y) affected individuals. (P) patient (A.F.)

and does not show polydactyly. The condition of the genital organs is unknown; he is unmarried.

The patient is the third of a family of five, four being males and one female. There was no parental consanguinity. The second eldest son was killed in the Great War. The remaining two brothers and the sister are alive and normal; the sister has two healthy sons.

History of patient.—A. F., aged 35 years. At the age of 12 years, his vision became dim and he was unable to read small print. After leaving school his vision improved, and he was able to read all sizes of print without difficulty. Five years ago, he began to have attacks of severe headache, the headache often being relieved by epistaxis. About this time, his eyesight again began to fail. He was fitted with glasses by an optician, but as the glasses did not help him, he discontinued their use. His vision is worse in bright sunshine and during the daytime, and improves towards evening. He has no difficulty in walking about after dark. He has worked continuously as a farm-servant, and

manages to perform his duties fairly well, but has been unable to read the newspapers for about a year.

Previous illnesses.—He had measles and chicken-pox when a child, and he has had pleurisy twice. In July, 1935, he was admitted to the Aberdeen Royal Infirmary suffering from acute appendicitis. His appendix was removed and he made an uneventful recovery.

Present condition.—Apart from occasional headaches, his general health is good.

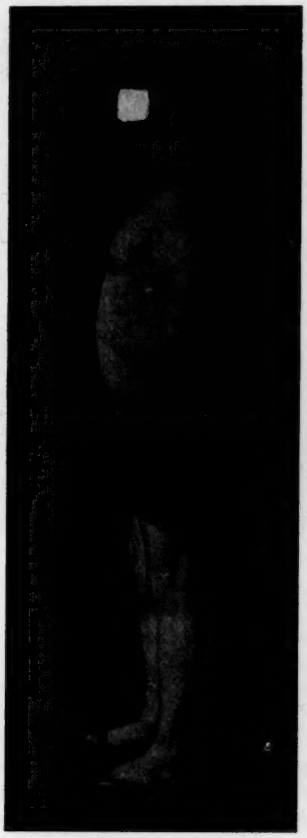


FIG. 2.

Profile view of A F.

Physical examination.—Height 5 ft. 2 ins. Weight without clothes, 12 st. 5 lbs. Walks with a slight stoop. Limbs and body well covered, abdomen protuberant, protuberance accentuated by lordosis of lumbar vertebrae (Fig. 2). Limbs possess good power, tendon reflexes present and equal on the two sides. Co-ordination good. Sensation to pain, touch and temperature normal. Jaws edentulous. Para-central scar, right side of lower abdomen. Liver and spleen not palpable. *Genital organs.*—Penis small, 1½ ins. in length. Hypospadias, urethral opening being about ½ in. along under surface near lower border of glans.

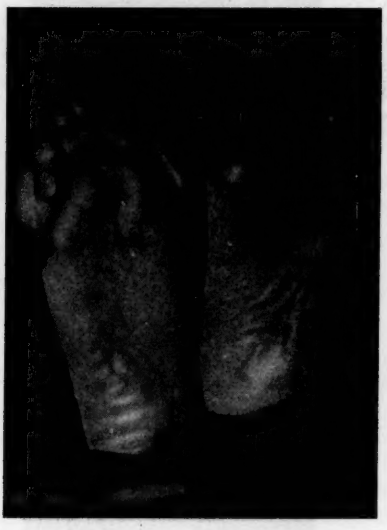


FIG. 3.

Photograph of feet of A.F.

The right testicle is normal in size, the left rudimentary. *Feet.*—Polydactyly and syndactyly are present in both feet. The supernumerary toes are post-axial, being situated between the fourth and fifth toes. The skiagram shows in the right foot a bifurcated proximal phalanx, the double toes each having two additional phalanges. The additional toe on the left foot is not so well developed, consisting of an off-shoot from the distal end of the proximal phalanx. The syndactyly consists of webbing between the second and third toes of both feet, only the terminal phalanges being separate (Figs. 3 and 4). *Hands.*—The fingers are short

and stumpy, but the skiagram shows no bony abnormality. *Cardiovascular system.*—Pulse, 72 per min. Blood pressure, 140/95. Heart normal. Chest normal. Haemoglobin, 93 per cent. *Cerebro-spinal fluid.*—Cells not increased. Globulin, weakly positive. Colloidal gold negative. Wassermann reaction negative. Kahn, negative. *Urine.*—Clear. Specific gravity 1025. No abnormal constituent. *Radiological examination of head.*—Sella turcica normal. No abnormality of bones of skull.

FIG. 4.

Skiagram of feet of A.F.

Ophthalmological examination.—The pupils are medium in size, react sluggishly to light, and slightly better on convergence. They dilate fully with homatropine. The ocular tension is normal. All movements are full, there is no strabismus, or nystagmus. V.O.D. 6/60, refraction emmetropic. V.O.S. 6/60, refraction emmetropic. Reads Jaeger 6 type slowly. The fields (Fig. 5) are generally contracted, and show a defect in the left upper temporal field. An indefinite central scotoma for red and green can be demonstrated in both fields. He is not colour blind, but often makes mistakes regarding colours. Both optic discs are pale, with sharp edges. The arteries are narrower than normal. No pigmentary change could be seen at the periphery, but there is slight mottling at both macular areas, with a grey spot near the left macula (Fig. 6).

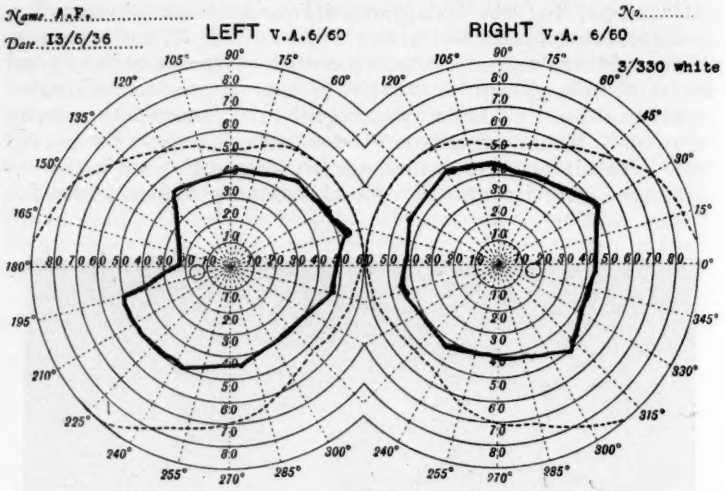


FIG. 5.

Visual fields of A.F.

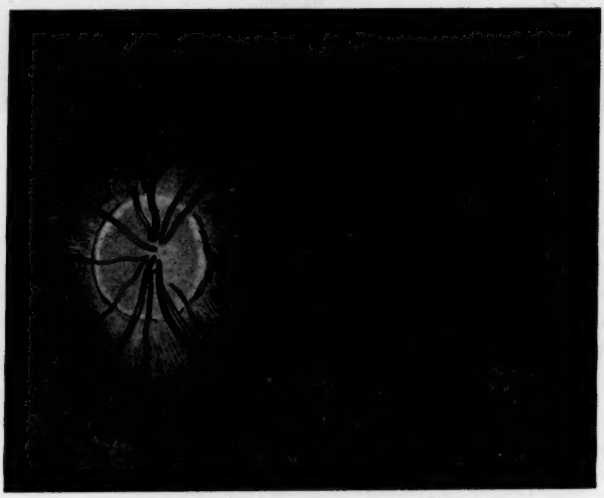


FIG. 6.

Drawing of left fundus of A.F., showing optic atrophy and macular degeneration.

Mental condition.—He has a vacant solemn expression, never smiles and always speaks in a rather low husky voice. When asked a question he always takes some time to answer. His memory appears to be good, but it was very difficult to get a history of his past life; no information was volunteered, and in most cases leading questions had to be asked. It was found impossible to obtain accurate particulars of his relations from him. His mentality is definitely below normal.

Comment

THE visual symptoms appeared late, being first evident at the age of 12 years; it is interesting to note that remission occurred, vision being apparently normal from 14 to 30. Unlike the usual state of affairs in retinitis pigmentosa, the patient sees best in a dull light, and has no difficulty in finding his way about in the dark. At the periphery the retina appears to be normal, only the macular area being affected, this is not surprising when it is remembered that the macular area is photoptic in function, and has a relatively high light threshold compared with the remainder of the retina which is scotoptic in function; in the eye adapted for darkness it is about one thousand times more sensitive to light than the fovea.

Summary

THE patient shows the complete Laurence-Moon-Biedl syndrome. (1) Moderate obesity; (2) Hypogenitalism and hypospadias; (3) Mental retardation; (4) Polydactyly; (5) Syndactyly; (6) Optic atrophy and macular degeneration; (7) Lordosis of lumbar vertebrae.

I am indebted to Dr. R. J. E. Paterson for supplying me with the particulars of the pedigree, and to Professor L. S. P. Davidson for the physical examination of the patient.

A TRIAL SPECTACLE FOR PRISM PRESCRIPTION

BY

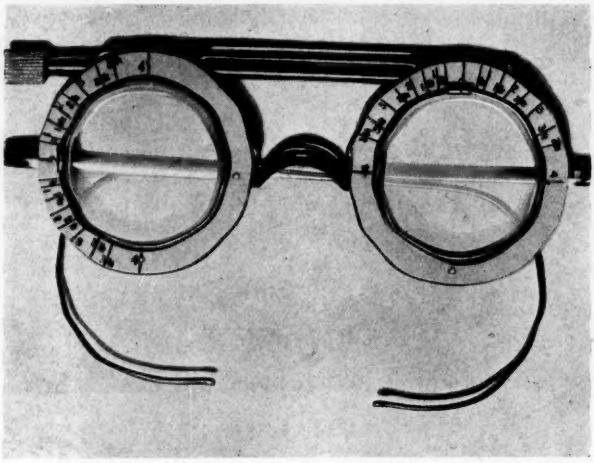
I. C. MICHAELSON

GLASGOW

THE purpose of this variable prism spectacle is to determine the prism necessary for the comfort of the patient and to do so by overcoming two difficulties inherent in prism prescription.

The first is the difficulty of knowing to what extent a vertical or horizontal phoria should be neutralised. Some oculists prescribe the full vertical error divided between both eyes, while others prescribe empirically only a fraction of the error, likewise with exophoria for reading distance. Some oculists have no definite ruling by which they prescribe, while others prescribe up to two-thirds of the negative duction at reading distance. The correction for muscular imbalance, in its very nature, cannot have the precise predetermination of the correction for astigmatism.

The second difficulty is that with muscle-imbalance we are not dealing with a static defect measurable with reasonable error at any time, but with a changing defect, the amount of which varies not only with the initial defect and duction power but with the behaviour of these during the constant use of the eyes as in reading. No *a priori* consideration can inform us of the rate of



tiredness of the duction powers of the eyes. Because of the failure to recognise these inherent difficulties the prescription of prisms has in many cases, especially with horizontal prisms, been one of trial or error; with the results that comfort is more often given to the patient by the removal rather than by the prescription of the prism and the oculist becomes more hardened in his opinion that prisms do no good.

This spectacle obviates the necessity of determining beforehand the amount of the phoria to be neutralised, and is a means of measuring the changing prismatic needs, which are dependent on the variations in phoria and muscle duction power during the constant and natural use of the eyes.

Each cell of the frame contains a 4 ∆ prism and both prisms can be simultaneously rotated by the screw so as to give a maximum of 8 ∆ between both eyes, base in, or base out. A prism can easily be removed and replaced so that a vertical prismatic power up to 8 ∆ can be used. The frame is so light that it can be borne without any discomfort over the patient's usual spectacles containing his presbyopic or other correction. The suspicion that a prism may be required is usually aroused when the patient complains that no relief of his symptoms followed the use of his glasses. This, and the type of prism likely to be needed, is confirmed by testing the phorias and duction powers for both distance and near. The patient is given the spectacle to take home and is informed beforehand in which direction to turn the screw and is told to do so when the symptom arises for which prismatic correction is considered to be possibly advisable. This is usually asthenopia and it is not unusual to find a patient who despite the most careful correction of his refraction error cannot read for more than half an hour at a time. He is told to turn the screw about 1 dioptre or so at a time and to continue reading for some time after each change of the prism, until he has reached a point where the maximum comfort seems to have been obtained. This is repeated for several evenings and the result reported at the end of that time to the oculist. The latter has then definite evidence on which to prescribe prisms and knows not to do so should the patient inform him that no help was obtained in any position.

I have not used the instrument yet in treating symptoms due to vertical phorias but many exophorias with low negative duction at reading distance have been treated successfully, and with the confidence its simplicity permits.

The instrument can be used for measuring most of the vertical phorias likely to be met with in practice, and low degrees of horizontal phoria. (The spectacle is supplied by Messrs. Curry and Paxton, Ltd.)

PAGET'S DISEASE OF THE EYELID ASSOCIATED WITH CARCINOMA

BY

DR. A. HAGEDOORN

(UNIVERSITY EYE HOSPITAL, AMSTERDAM)

IN September, 1929, B. P., a woman aged 56 years was sent to the clinic by her ophthalmologist on account of severe pain in the left eye. She had been under treatment for trachoma since childhood. The left tarsus was extirpated in 1921 and the right lacrimal sac in 1925. She suffered from recurrent attacks of iritis in the left eye. The right eye showed cicatricial trachoma, pannus, and no sign of irritation or inflammation. There was myopia of 1 dioptre, vision after correction being 1/6.

The left eye had blepharitis, dacryocystitis and there was a thick viscous secretion. The conjunctiva was thick and reddened, the surface appearing a little " greasy," the conjunctival sac was considerably narrowed by cicatrices. The surface of the cornea was irregular and there was a dense old pannus. As there was light perception and normal tension the sac was extirpated, further treatment being conservative. After two years, however, it proved necessary to excise the eye together with the posterior part of the lids and the conjunctival sac as the socket would have been too small for the reception of an artificial eye.

In examining the sections of this case the following changes were found:—

(*a*) *Changes due to chronic trachoma:*—Xerosis of the conjunctiva, with production of keratohyaline and horn in the superficial layers of the epithelium. It is impossible to trace the place where surface epithelium and conjunctival epithelium join. *Changes in the normal anatomy.* In some sections a fairly normal tarsus with normal Meibomian glands is present, so that the tarsus must have been removed only partially. In most sections, however, smaller and larger vessels have grown into the tarsal tissue so that the margin of the eyelid cannot be recognised. The ducts of the glands open on the conjunctival side of the eyelid (entropion). Obliteration of glands and occasionally a cyst were seen. *Inflammatory changes.* Infiltration with lymphocytes, plasma cells, rarely in follicles or perivascular, but especially under the xerotic epithelium.

(*b*) Besides the above there were some interesting anomalies of a blastomatous nature. As stated above, instead of the normal conjunctival epithelium, a stratified epithelium covers the posterior surface of the eyelid (xerosis). It is clearly marked off

against the underlying tissue by a basal membrane. On top of the regular basal cells there are a varying number of layers, constituting the stratum spinosum, the spinae of which are difficult to see in the haematoxylin-eosin and v. Gieson stain. The superficial layers may contain keratohyaline. Generally a thin stratum corneum is present, sometimes even without an underlying layer of keratohyaline containing cells. In studying this epithelium from

FIG. 1.

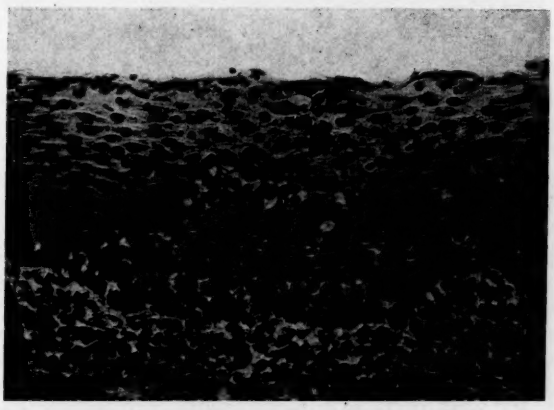


FIG. 2.

the cornea towards the margin of the lid, though varying in thickness, it shows a regular structure. Then, at the posterior surface of the tarsus swollen hydropic cells appear. These cells of abnormal shape constitute a layer of many cells' thickness chiefly in the basal cell region (Fig. 1), but they may be present in the higher layers as well (Fig. 2). In some sections even, areas of epithelium may be found which are entirely altered in their whole thickness, the normal cells having disappeared on account of the hydropic cells. The nucleus of these cells is nearly round, the chromatin network and the nucleoli have been transformed into a dense darkly staining homogeneous mass (Figs. 1, 2). Here

FIG. 3.

and there are seen nuclei, staining less intensively with a trace of intra-nuclear structure, irregular nuclei, nuclei resembling those of the basal cells and prickle cells surrounded by a hydropic, vacuolated protoplasm, which often seemed to be entirely absent, the nucleus lying in an empty space marked off often by a distinct cellular wall, showing no trace of prickles. Though in manipulating with the microscrew of the microscope pathological nuclei rarely seem to be flat, and crescent shaped nuclei are rare. Occasionally pyknotic, darkly staining nuclei clump together. Besides the vacuoles in the cells themselves there are empty spaces between them simulating an intercellular oedema, while in other areas these spaces seem to have originated by confluence of hydropic cells (Fig. 3). It is extremely rare to meet a cell near the superficial layers which shows keratinisation.

Typical areas of xerotic epithelium alternate with diseased areas probably on account of a net-like distribution of the affection under the epithelium. It was also found in the epithelium of the inferior eyelid and continuous with the diseased areas of the superior eyelid at the canthus. It proved impossible to make a reliable reconstruction as more or less abnormal cells were found in apparently healthy epithelium. Either these hydropic cells must have a peculiar faculty of creeping under the deeper layers of the epithelium and in the epithelium over a large distance, without passing through the basal membrane, or else they must have developed from multiple centres.

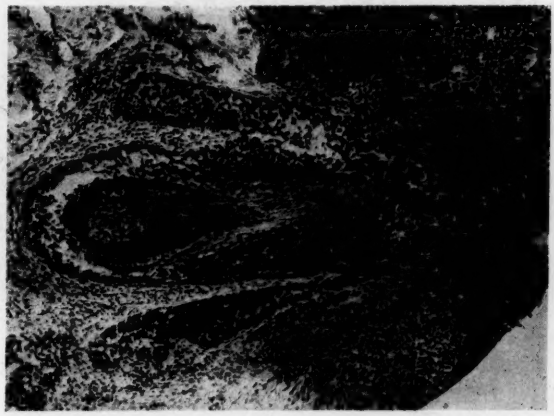


FIG. 4.

Towards the margin of the lid the epithelium is thicker with a well developed stratum granulosum and stratum corneum. The degeneration of the epithelium almost exclusively concerns the deeper layers, but here also affects the glands opening out on the surface. The cells surrounding the hairs and of the associated glands show the same vacuolated hydropic aspect as the pathological cells described under the xerotic epithelium. However, the nuclei are generally not so deeply stained and irregular, the empty inter-cellular spaces are often considerable. It seemed very doubtful whether this had to be considered a degeneration caused by a prolonged chronic inflammation or an affection of a blastomatous nature (Fig. 4). However, the cells completely filling up a Meibomian gland lie close together, the protoplasm stains well, the shape of the darkly stained nuclei

varies considerably from round to elongated and thin, strongly resembling certain varieties of basal cell carcinoma. Still it seemed as if these cells did not grow infiltratively (carcinoma *in situ*?) (Fig. 5). On carefully inspecting the sections, however, a region could be found with infiltrative growth of similar cells (Fig. 6). Carcinoma seemed probable.

FIG. 5.

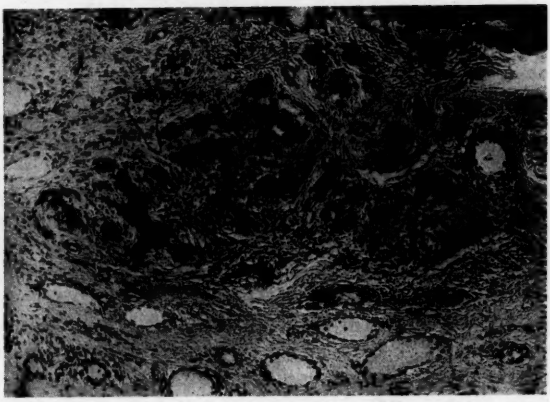


FIG. 6.

One year later the patient re-entered the clinic, as she had observed a small tumour under the upper eyelid. As this recurrence confirmed the diagnosis of carcinoma I performed exenteration of the orbit. At the present date she has had no recurrence.

On general examination no other primary malignant tumour or metastasis could be detected. She had been under treatment since the age of 25 years. In 1903 she was three months in the University Hospital for Nervous Diseases; in 1904 palsy of both legs and the left arm; in 1925 palsy of the right arm; and in 1924

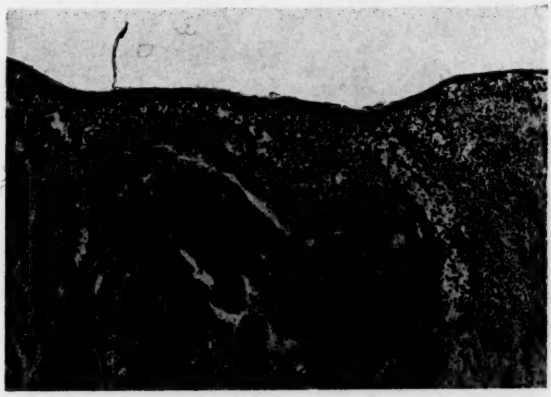


FIG. 7.

an operation was performed on the stomach. A complicated case history, which does not make a primary tumour elsewhere probable. She was affected with hysteria.

Material of the exenteration showed a similar affection of the skin, which was quite normal in the non-affected regions. Here again the anomaly is chiefly present in the deeper layers of the epithelium, though here and there it may be affected throughout its whole thickness (Fig. 7). Darkly staining nuclei are rather rare, whereas the vacuolisation of the protoplasm of the cells is very considerable.

The nuclei are of a varying shape and irregularly arranged even in the higher layers. Large cells with a crescent-shaped nucleus were more frequent here than in the first described affection of the conjunctiva. Isolated pathological cells are found in the normal epithelium at a great distance from the diseased areas.

FIG. 8.

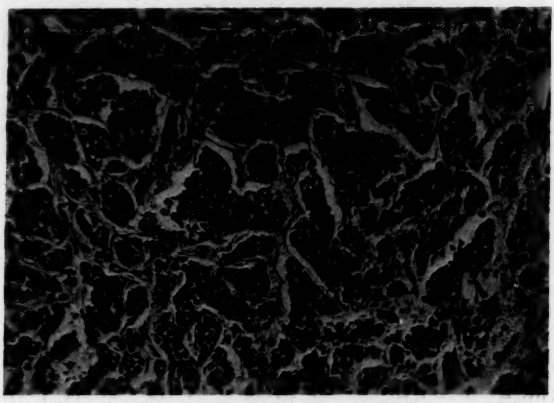


FIG 9.

Abnormal cornification is totally absent. Long shoots of vacuolated cells pass into the subcutaneous tissue often surrounding hairs. If they grow in the tissue under the epithelium they may suggest an adenoid growth. The picture (Fig. 8) resembles that of basal cell carcinoma, given in Ewing's* textbook (Fig. 434).

*Ewing, James. Neoplastic Diseases. W. B. Saunders. London, 1931.

The small tumour of the orbit which could be felt on clinical examination consisted of solid infiltrating strands of epithelial cells: carcinoma simplex (Fig. 9). A malignant blastomatous growth seemed probable from the anomalies previously described, it became fairly certain from the recurrence as a subcutaneous tumour. However, only the histological aspect of this latter tumour allows one to make the diagnosis *carcinoma* with certainty.

This carcinoma is interesting on account of its being associated with lesions often called pre-carcinomatous, not described hitherto in ophthalmology. The fact that the pathological condition of the epithelium is generally restricted to the deeper layers, the absence of dyskeratosis, akanthosis and hyaline degeneration, the rare occurrence of mitosis, the association with affection of the Meibomian and sebaceous glands are in favour of the diagnosis "Paget's disease." The intensively staining homogeneous nuclei (clumping cells), though generally regular and round, the occasional appearance of large hydropic cells with pyknotic nuclei, the rare areas where the whole epithelium is very irregular remind one of "Bowen's disease." Glycogen which is richly present in Paget's and Bowen's disease could not be demonstrated, probably on account of the material being fixed in 10 per cent. formalin in which the glycogen is generally dissolved. The Sudan test in frozen sections was negative.

It is difficult to judge whether the affection originated from the skin of the eyelid which was left *in situ* in the first operation, which, on clinical inspection, did not show anything abnormal, or from the modified epithelium covering the posterior surface of the eyelid. As far as I know chronic trachoma and the treatment of trachoma have never been described as related to the development of carcinoma. Only Ischreyt has described a case of carcinoma in a patient affected by trachoma. In certain chronic inflammatory diseases and after prolonged traumatism, blastomatous growth may occur. Of course a third possibility, the growing from a gland or duct with secondary subepithelial growth is possible. There has been much discussion on this subject in Paget's disease of the nipple. This case was too far advanced to give any reliable indication as to the point of origin.

Summary

A case of Paget's disease (in some features resembling Bowen's disease) of the eyelid is described, which was found histologically in the eyelids removed from a patient affected with trachoma and xerosis. One year later the appearance of a subcutaneous nodule necessitated exenteration of the orbit. On histological examination this nodule proved to be a carcinoma simplex.

CHILDREN WITH DEFECTIVE VISION

BY

PROF. R. A. KAZ, M.D.

LENINGRAD

THE question of the education of children with defective vision is a problem of some standing. Where are such children to be taught? In schools for the ordinary children with good average sight they see too badly and in schools for the blind they see two well. For, to try and teach the half-blind among the totally blind, the teachers of the blind say is pure punishment. They teach such a child to read with the fingers and the child always prefers to use such sight as he has. Instead of expelling children with defective sight from the schools for the blind these teachers of the blind consented to teach in the ordinary schools even quite blind children. Here is an inverse phenomenon: the college for the blind admits seeing children among its pupils. The explanation is that investigations of children in the college for the blind which were presented some years ago to to the Leningrad Society of Paedology revealed, contrary to all expectation, success in conservation of sight.

And so, the feebly-sighted children were transferred from the schools for the sighted to the college for the blind and from the college for the blind to the school for sighted children, and they find in neither place conditions suitable for their education.

What are these conditions?

For educational institutions as is said in my "Test-types for the determination of the sufficiency of the light reserve in schools and workshops"—not less than one-third of the normal vision is required, this is the degree of vision necessary for distinguishing the type *corpus*, where the height of the letter is 1·5 mm. From the time of Cohn this type has been reputed as the least that is admissible in the schools. So then, the scholar ought to be completely satisfied for his teaching with vision of 0·33. But in that case all remaining claims must be strictly accomplished: the lighting must have the due reserve,[1] study must be conducted with frequent interruptions, the manuals must not be dirty, in the copy-books the lines must stand out quite clearly. Briefly it is necessary to keep in mind that the work is done by the eye at its maximal effort, without the sight-reserve of two-thirds by children with normal vision.

With vision of 0·2—0·1 we have to employ larger types. In the A.B.C.-books there are such types. But it is impossible to sit continuously at A.B.C.-books. Here one will have to use a

magnifying glass (telescopic spectacles) or to resort to reading on a magic lantern screen.

Finally, with vision of 0·05—0·02 it is better to conserve this sight for daily life and to receive instruction among the blind—of course, if it is possible with physiotherapy to raise the vision this should be done. The case of the child F., aged eight years, where persistent physiotherapy succeeded in raising the vision from 0·03 to 0·7[2] should be mentioned. Public officials should especially take note of this case, in the interest of sight-saving.

Nowadays the idea of sight-saving classes are world-wide. In America on this question are published two special journals: "The Sight-Saving Review" and "The Sight-Saving Class Exchange." Howard[3] reporting in St. Louis on a child with defective sight, pointed out that the cost of supporting these classes was about 2,000 dollars a year for a class; and Weekers[4] in his report, "The School for Semi-sighted," communicated to the Belgian Ophthalmological Society at the International Congress for Preventing of Blindness, on which representatives of France, England, America, Germany and Switzerland were occupied by questions of a school for children with defective vision; the design of the schools, the plan of teaching and preparation of a teacher for these schools. At last, classes for preservation of the sight of feebly-seeing children were commenced also in Leningrad, thanks to the endeavours of Drs. A. T. Pospielowa and N. G. Kratchkowskaja and of the teacher B. T. Kowalenko.

In the case of the child referred to, it is not only the teachers, whose duty it is to try and conserve vision as well as educate the child who must pay attention to this problem, but also all others who attempt to raise the vision of the child to the possibility of his being taught in these classes, as well as such who allow themselves to think of the translation of feebly-seeing children into the common classes. But in these cases the request of Dr. Jackson,[5] that such children "should be seen every few months" is insufficient.

One or two months before the school begins a daily or every other day course of physiotherapy will show if the vision of the little patients benefits or not by physiotherapy, one will know if it is suitable to let the children keep their places and also if it be possible or not to link to them a few others with still worse vision. Of course, such treatment is useless in the totally blind. But there are other cases which theoretically seem not to yield to any treatment, and in reality we are able to give these a sensible improvement in vision, thanks to physiotherapy. Such occurred in the above-named case, where the improvement of the vision was maintained till 0·7 passed into optic atrophy. Or, for example, myopia. At first sight it seems strange to think of visual amelioration in

myopia. Indeed, the number of dioptres will not be changed the refractive anomaly itself will remain, but improvement of vision can occur in consequence of treatment of the retina in such a manner.

There is another case from my fore-cited article.[2]

S., aged 42 years. Myopia 19 D. with gross retinal changes. Vision of the right eye =0·1, of the left =0·005. After a treatment of three months R.V. =0·25, L.V. =0·15.

In a year his nephew appeared. He was aged 21 years. Myopia 13 D. without obvious changes in the retina. The vision of both eyes was =0·2. On the insistent request of the patient I gave him binocular physiotherapy for the retina. In three months' time he had steady vision of 0·5 in both eyes.

Thus, the children who show feeble vision which cannot be corrected by glasses are to be distributed in three groups. The first two groups—with vision of 0·3 and 0·1—are designed for the sight-saving classes, and for physiotherapy in the first instance; the third group is composed of border-line cases where the question whether the children must go for teaching to the blind, or if they can be sent into the sight-saving classes must be solved. These two first groups can receive physiotherapic treatment without interrupting the study, if both institutions do not work simultaneously.

You may ask why it is necessary for children to have the ocular physiotherapy, when their sight is preserved by the sight-saving class? But, firstly, such a class is necessary, and as it has been stated the expenses are heavy. Secondly, even if a class exists for feebly-seeing children, it may happen that not every one is in a state to make use of such a class unless there has been previously an improvement of sight from physiotherapy. And thirdly, the removal from a common school, which becomes possible with the aid of physiotherapy, frees a place for a child more in need of preservation of sight, and to the freer of this place it gives something much greater for all his further life—the improvement of vision.

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ANNOTATION

Education of Children with Defective Sight

The paper by Professor Kaz which we publish in this number is one more piece of evidence of the interest being taken at the present time in a matter of great importance. He asks some pertinent questions and we gather that in the U.S.S.R. various methods of dealing with partially sighted children have been tried. He appears to lay great emphasis on the need for adequate supervision of the child's general health, if we understand his allusions to physiotherapy aright. And of course the importance of this is paramount. It is obvious that children who are for practical purposes totally blind are only suitable for education in schools for the blind. He makes no direct mention of the myope classes which have been so successful in this country and elsewhere, it may be that these are included in the sight-saving classes of which he speaks. We do not know if the incidence of myopia in the U.S.S.R. is heavy or not; but if it be, we think that the U.S.S.R. would be well advised to institute such schools in the great centres. The problem of the education of the child with markedly defective sight is a difficult one. In our view much depends on the age of the child at the time that the condition causing the defect arose. If a child's defect be congenital or arises very early in life it has probably forgotten what good sight was like when the time for school comes. Then again the definition of blindness is difficult. All must have met in practice many people with very defective vision as measured in terms of Snellen's test types, who have not only not complained of their defect, but have managed to lead active, useful lives. It may be argued that such patients acquired their defective sight in most cases after the school period ended, and so should not be included in an annotation on the education of children with defective sight. Such remarks, of course, apply more to those of literary tendencies than to those engaged in such work as cabinet-making. We know of a patient who can still read quite well with his glasses, if he holds the book close; but no combination of lenses will give him 6/60.

The definition in force in this country "so blind as not having sufficient sight to be able to see work for which sight is essential" is purposely vague, and it is doubtful if a more satisfactory definition can be arrived at. But if we are to define blindness in terms of visual acuity there would seem to be much in favour of the definition given by Miss C. Edith Kerby and alluded to in an annotation on page 99. Our readers may remember that she postulated five groups, the best sighted of which were the border-line cases with vision of about 6/60; the other groups included such classes as perception of motion, travelling sight, ability to read large head lines. The border-line group contains cases where there are field defects which may counterbalance a better acuity than 6/60.

ABSTRACTS

I.—TRACHOMA

(1) **Wilson, R. P. (Egypt).—The pathology of trachoma.** *Bull. Ophthal. Soc. of Egypt*, Vol. XXIX, p. 1, 1936.

(1) In Egypt infections with acute ophthalmia and trachoma usually occur simultaneously; it is therefore difficult to distinguish the earliest changes in the conjunctiva produced by trachoma alone. The appearances usually seen are those of an acute inflammatory infiltration of the sub-epithelial tissue. There appears to be growing evidence that the earliest sign of trachoma is the presence in cells of the conjunctival epithelium of Halberstaedter-Prowaczek Körperchen (H.P.K.). The sub-epithelial infiltration consists of lymphocytes, mononuclear leucocytes, plasma cells and histiocytes, which appear in that order or about the same time. The presence of polymorphs characterises a mixed infection.

Marked papillary hypertrophy of the conjunctiva, with interpapillary epithelial crypts are always developed early, although they may not be obvious on clinical examination.

The earliest stage of the disease, therefore, is seen to exhibit the signs of a sub-acute or chronic inflammation.

The first signs of follicular formation occur at the same time in the sub-epithelial infiltration in the tarsal and retrotarsal conjunctiva, but they are larger in the latter situation. The follicles characteristic of Tr. II*a* therefore begin to develop at the same time as Tr. I follicles, but the latter are definitely recognisable before the former owing to the difference in the anatomical structure of the two parts of the conjunctiva.

The trachoma follicle is indistinguishable from the follicle of follicular conjunctivitis.

A typical early follicle shows a fairly well-defined peripheral zone of lymphocytes which stains darkly as compared with the central region. No plasma cells are seen in the peripheral zone, and no capsule can be distinguished. Older trachoma follicles differ from those of follicular conjunctivitis by the necrosis of the central cells. Large phagocytic cells, some of which contain nuclear débris, appear which are known as cells of Leber. Follicles of this type are seen principally at the upper edge of the tarsus and in the retro-tarsal folds; they may rupture spontaneously or on slight pressure, thereby differentiating the condition from follicular conjunctivitis. Besides rupture the follicles may disappear by absorption.

Wilson states that follicles are invariably found in trachoma but that they may be obscured by the sub-epithelial infiltration; this is especially the case in Tr. II*b*.

The replacement of the sub-epithelial infiltration by cicatricial tissue may commence quite early while the follicles characteristic of Tr. I and Tr. II*a* are still present. Islands of trachomatous infiltration surrounded by a cicatricial network are common in quite old cases of Tr. III.

The epithelium becomes thin and stratified.

The condition which in Egypt is called " post-trachomatous degeneration (P.T.D.) is common in Tr. III, and is the result of necrotic changes in epithelial debris deposited in the interpapillary crypts previously mentioned. Other degenerative changes may be found in the lids, hyaline, calcareous or bone-formation. As cicatrisation progresses entropion and trichiasis are found in a large proportion of cases.

In the final stage of trachoma, Tr. IV, the sub-epithelial layer is replaced by fibrous tissue which is adherent to the tarsus, and the epithelium is thin and stratified.

The author is of opinion that the early and important trachomatous changes which occur in the upper part of the corneal limbus are the result of direct infection from the conjunctiva of the upper lid, thereby differing from Michail and others who believe that the extension of the trachomatous process from the conjunctiva to the cornea proceeds by way of the fornix and bulbar conjunctiva. The invasion of the cornea by an inflammatory exudate is between the epithelium and Bowman's membrane, but the latter is often destroyed in severe cases. The new vascular channels which accompany the cellular infiltration remain permanently, either occluded or patent, as evidence of previous trachomatous change, after all the infiltration has been absorbed.

In a discussion, after reading the paper abstracted above, the author said " I am entirely in disagreement with what MacCallan has recently written on this subject. His so-called bleb-like excrescences or Tr. II*a* follicles are, I believe, nothing more than large (not dilated) trachoma follicles in which necrosis has taken place in the centre and which rupture readily on pressure. In my opinion there is no evidence whatever neither anatomical, clinical or pathological for the statement that they are the result of blockage of the ducts of the Meibomian gland. It is perfectly true that the lobules of these glands do sometimes become dilated but in my experience never to the extent of producing a bleb through the dense fibrous tissue of the tarsus. Moreover it is not on the tarsal conjunctiva but at the upper edge of the tarsus and in the retro-tarsal folds that one usually finds expressible

follicles and here no Meibomian glands exist." It should be noted that it was Pulvertaft who made the above pathological observation, giving priority to Michail and to Birch-Hirschfeld.

A. F. MACCALLAN.

(2) **Bruck, A. J. (Gomel, U.S.S.R.). — Deposits of fat in trachomatous pannus.** *Arch. of Ophthal.*, Vol. XVI, December, 1936.

(2) During the period 1927-29 **Bruck** has examined 500 patients with pannus, using the slit-lamp and in 16 of them he observed fatty changes in the cornea. The affected part is usually central, the opacities appearing first below the pupillary area and spreading upward. At first they consist of white spots with distinct outlines, lying along the vessels mostly at the bifurcations, they then coalesce into irregular plaques which in time assume a yellowish tinge. Some of the vessels of the pannus become congested, tortuous and slightly bluish; near the centre of the cornea they divide to form a rich capillary network in the region of the deposits which form a kind of sheath round the walls of the finer blood vessels. It may take a long time for the deposits to absorb, and when they do, the process is accompanied by obliteration of the lumen of the vessels whose walls become transparent.

Some of the author's cases were treated by corneal transplantation, thus providing material for histological examination of the affected cornea. Fat was found in the superficial and deeper layers. The smallest granules occurred within the protoplasm of the corneal cells, the larger ones between the lamellae. With regard to pathology, there are two main factors to be considered,

(1) An increase in the amount of fat in the fluid penetrating into the tissues.

(2) Retardation of the circulation of the blood.

Both these factors are involved in other fatty changes of the cornea—*e.g.*, arcus senilis and the fatty deposits sometimes seen in old interstitial keratitis. The increase of fat in the blood has a constitutional basis, possibly associated with some endocrine disturbance, a fact which accounts for the relative rarity of fatty changes in cases of trachomatous pannus.

F. A. W-N.

(3) **Oguchi, Majima and Sekiya (Japan).—Studies on trachoma.** *Acta Soc. Ophthal., Japan*, Vol. XL, p. 7.

(3) **Oguchi, Majima and Sekiya** have continued their researches on the aetiology of trachoma with the following results:

1. The tissue from a patient with acute trachoma, which has been found to contain Prowaczek-Halberstaedter Körperchen was

triturated with a 1 per cent. aqueous solution of beef testicle in an ether extract, according to the directions given by Oba. This emulsion was injected into the testicles of rabbits. After a few days swelling and hardening of the testicles appeared which reached its climax after five or six days. Within two or three weeks the inflammation disappeared. If, within one week from the time of the injection, a piece of the testicle is removed and is injected into the testicle of another series of rabbits, following the same procedure, the result is always the same. In this way propagation of the virus is effected, and the virulence increases gradually so that finally a necrosis of the testicle is effected.

2. Bacteriologically the testicles were found to be sterile. Histologically, growing Halberstaedter-Prowaczek Körperchen can be seen in certain reticulum-like cells of the testicular parenchyma, representing part of their cycle, if thin frozen sections are stained according to the authors' own modification of the Unna-Pappenheim method. They are like rods or spores (Lindner's initial bodies) or like elementary bodies. A film preparation of the testicular tissue gives similar results. The appearance of the H.P.K. in the testicles varies with the degree of inflammation, and one week after the injection they begin to disappear. In this stage the propagation of the virus becomes difficult. This fact strengthens the belief upon which the existing hypothesis of the authors rests, that the inclusions in the cells originate from certain micro-organisms and that they are a kind of virus colony. Further it might be thought that these micro-organisms might produce the inflammation in the testicles.

3. Culture experiments with inflamed testicular tissue on artificial media have been unsuccessful.

4. The propagation of the material obtained by multiple propagation of the virus-containing tissue of the testicles is certainly possible in the testicles and in the eyes (conjunctiva, anterior chamber, vitreous) of rabbits and monkeys, and in the tissue of the conjunctiva H.P.K.-like bodies may be found.

5. The injection of a tissue emulsion of chronic trachoma, in which no H.P.K. could be found, into the testicles causes not acute trachoma but only a slight inflammation, or none at all, while propagation is also impossible.

6. When virus containing tissue of the testicles of rabbits or monkeys is rubbed into the human conjunctiva affected by chronic trachoma an aggravation of the trachoma occurs but inclusions in epithelial cells have not yet been found.

7. Inclusion conjunctivitis of the new-born, swimming-bath conjunctivitis and the so-called acute trachoma with inclusions might

be similar diseases and are all produced by H.P.K. which originate in the genital tracts. It might be better to call them all *inclusion conjunctivitis* or, according to Lindner, *paratrachoma*.

8. H.P.K. can only be found in inclusion conjunctivitis (paratrachoma). If they are found in other diseases a mixed infection must be considered.

9. The connection between trachoma and paratrachoma may be very close and complicated and needs further investigation.

A. F. MACCALLAN.

(4) **Cornet (Indo-China).—Trachoma of the fornix. (Le trachome du fornix ou du cul-de-sac, entite morbide dont le trachome "courant" n'est que l'extension).** *Bull. de Soc. Med. China de L'Indochine*, July-August-September, 1936.

Keller (Hanoi).—Trachoma in Indo-China. (Le trachome en Indochine). *Ibidem.*

(4) In these two papers **Cornet** and **Keller** call attention to a form of trachoma which appears to differ considerably from that commonly found elsewhere. Both describe trachoma affecting the upper cul-de-sac only and running its course without any affection of the cornea. This is very different from MacCallan's view, according to which the corneal invasion is diagnostic of trachoma and without corneal invasion there is no trachoma. According to Cornet about one third of his cases show no corneal complication. Keller goes even further; he states that there is no such thing as trachomatous keratitis; so long as the cornea retains its normal sensitiveness, there are never corneal lesions, however severe the trachoma. Only when the cornea is to some extent anaesthetic do lesions follow. He seems to regard all pannus as luetic in origin.

HAROLD GRIMSDALE.

(5) **Busacca, Archimede (San Paulo, Brazil).—Have the nodules produced by intravitreous inoculation of trachomatous material a specific character? (Les nodules obtenus après inoculation intravitreenne de matérial trachomateux sont-ils spécifiques?).** *Ann. d'Ocul.*, Vol. CLXXIII, p. 528, 1936.

(5) **Busacca** investigated the reaction of the retinal neuro-epithelium to the trachomatous virus, which is known to possess a lytic action on epithelial cells and in addition gives rise to the production of follicles consisting of reticulo-endothelial cells. He inoculated small pieces of trachomatous pannus into the vitreous of rabbits, guinea pigs and chickens. At first no bacteriological precautions were taken and many animals developed

panophthalmitis. Later, the author tried to eliminate mixed infection by filtering the trachomatous material or by treating it for eight or sixteen days with glycerin. Glycerin does not destroy the virus. The eyes of the animals were subjected to an antiseptic treatment.

Many inoculated animals did not show any reaction at all. Only two out of more than a hundred animals showed the development of a pannus similar to that seen in human trachoma. The intraocular changes could be classified in three groups according to the degree of the reaction.

The author mentions retinal degeneration as a sequel to his inoculations, but it is the choroid which shows the most marked reaction.

The first type of reaction is nothing but a mild uveitis which clears up in some weeks. The choroidal vessels are encased with cells produced by the adventitia of their walls.

A sub-acute uveitis leading to retinal detachment is described as the second type of reaction. The perivascular encasing of the choroidal vessels is much increased and amounts to the formation of nodules round the large choroidal vessels. Eventually, shrinkage of the globe sets in.

The third type of reaction corresponds to the occurrence of an acute panophthalmitis. Again, the typical nodules develop in the uvea.

By intravital staining with trypan blue the reticulo-endothelial nature of the cells, which form the nodules, could be ascertained. The framework of the nodules is not formed by these cells but by the fibres of the tissue in which the nodules develop. By and by, these fibres are pushed aside and give the appearance of an envelope.

The author has never succeeded in finding in these nodules Rickettsia-like bodies, the presence of which he could demonstrate in human trachoma and after trachomatous inoculation into the testicle of the guinea pig. von Szily produced similar nodules by intravitreous injections of an emulsion prepared from eyes affected with sympathetic ophthalmitis. Further, these nodules could not be differentiated from those which occur after the inoculation of non-trachomatous glycerinated tissue. Therefore, the author is of opinion that the nodules represent an unspecific reaction of the adventitia of the vessels.

HUMPHREY NEAME.

II.—CONJUNCTIVA

(1) **Vito (Naples).—Conjunctivitis secondary to warts of the lid margin. (Sulla congiuntivite da verruca del bordo libero delle palpebre).** *Boll. d'Ocul.*, June, 1936.

(1) **Vito** has observed three cases in which a troublesome unilateral conjunctivitis was accompanied by warts on the free margin of the lid, and was relieved by the removal of the warts when other means had proved inefficient. He thinks that, taking into consideration the infective nature of these tumours, there can be little doubt that the conjunctivitis was caused by the virus carried into the conjunctival sac by winking. Cavara has shown that conjunctivitis may be caused by infection in the presence of molluscum, and has by experiment proved the relation. The author has tried to confirm his hypothesis by similar experiments; he triturated warts in physiological solution and dropped the resulting liquid into the conjunctival sac. A slight conjunctivitis followed, more marked in the unaffected eye of one of the three patients; this man might have been sensitised by the previous condition.

HAROLD GRIMSDALE.

(2) **Joyeux, Ch., Sédan, Jean and Esménard, J.—Ocular filariasis. Conjunctival lesions in a case of onchocerciasis contracted on the Ivory coast. (Filariose oculaire; lésions conjonctivales dans un cas d'onchocercose contracte à la Côte d'Ivoire).** *Ann. d'Ocul.*, Vol. CLXXIII, p. 100, 1936.

(2) In a patient who returned from the Ivory Coast a short immobile onchocerca volvulus was found embedded in the bulbar conjunctiva of one eye. In addition, a number of small globules were to be seen in both eyes. The worm and some of the largest globules were excised. No embryos could be found in the globules, which presented the histological appearance of a granuloma formed round a foreign body. **Joyeux** and his collaborators supposed that the foreign body was an embryo which had disappeared. In the following months the patient developed three nodules in other parts of his body. The nodules were excised and found to contain a large number of worms. However, the eosinophilia persisted though no other manifestation of filariasis appeared in the following weeks during which the patient could be observed.

HUMPHREY NEAME.

III.—CORNEA

(1) **Sugita, Y. (Nagoya).—On the nature of the disc- and ring-shaped opacities of the cornea, and especially the Liesegang's phenomenon in the cornea. (Ueber das Wesen der scheiben- und ringförmigen Hornhauttrübungen, speziell ueber das Liesegangsche Phänomen auf der Hornhaut).** *Arch. f. Ophthal.*, Vol. CXXXVI, p. 52.

(1) Liesegang was the first to describe the ring-shaped opacity that is produced by applying a drop of silver nitrate on a gelatine gel mixed with pot. bichromate; the same result was so uniformly obtained with other substances in other colloids that it became known as the Liesegang's phenomenon.

Sugita applied this experiment to the cornea (also a colloid membrane) of living rabbits, producing a wound with the galvano-cautery and then touching it in the centre with sulphuric acid, whereby a disc-shaped opacity quickly developed round the cauterised area.

This disc-shaped opacity is due to the centrifugal diffusion of the acid and the albumin which it has precipitated and decomposed, producing many Liesegang's rings as a specific phenomenon in colloid membranes.

The clinical picture of the disc-shaped opacity, therefore, is made up of a series of these rings, which consist mainly of precipitated albumin (Eiweiss).

This experimentally produced clinical picture corresponds to that of keratitis disciformis seen in man and the histological appearances found in both are very similar. It is held, therefore, that the products of micro-organisms that have penetrated the cornea in human keratitis disciformis set up the same biochemical processes, with the formation of Liesegang's rings and the development of the characteristic clinical picture.

The ring- or disc-shaped opacity seen in ulcus serpens, aspergillus keratitis, Dimmer's keratitis, foreign bodies in the cornea and so forth is held to be also due to the formation of Liesegang's rings.

THOS. SNOWBALL.

(2) **Heinsius, E. (Berlin).—Experimental researches on the influence of vitamin A upon the regeneration of the corneal epithelium. (Experimentelle Untersuchungen ueber den Einfluss des Vitamin A auf die Regeneration des Hornhaut-epithels).** *Arch. f. Ophthal.*, Vol. CXXXVI, p. 103.

(2) **Heinsius** tested the action of cod liver oil and the vitamin A which it contains on a series of rabbits' eyes after producing

abrasions of the cornea, and found that on local application they had a definite accelerating effect on the regeneration of the corneal epithelium, thereby confirming the clinical results of the treatment of wounds by these agents.

It was found too that there was no material difference in the action of cod liver oil from that of vitamin A by itself, from which it was inferred that this vitamin was the sole factor in cod liver oil that has this effect on the formation of new epithelium.

Experiments seemed to show that the good effect of vitamin A depends on its concentration, being better with the weaker solutions.

This vitamin probably supplies the material necessary for the rebuilding of the cells—possibly the purines that favour the formation of cell nuclei.

THOS. SNOWBALL.

(3) **Moretti (Catania).—Acute haemorrhagic bulla of the cornea. (Bolla emorragica acuta della cornea).** *Boll. d'Ocul.*, December, 1936.

(3) **Moretti** records a very unusual happening in the course of chronic glaucoma. The patient, who was under periodical observation, and had been seen by the author shortly before, was suddenly seized by acute pain in the left eye; this was accompanied by the appearance of a large red mark on the cornea. There was no breach of the epithelium—the mark was a vesicle filled with blood. The epithelium seemed to be raised from Bowman's membrane. A small vessel ran from the limbus to the bulla; the author concluded that the bursting of this vessel had allowed the escape of blood which stripped the epithelium up, giving rise to the bulla. As the eye was blind and the patient was suffering intense pain, the eye was enucleated. The condition has no likeness to bullous keratitis.

HAROLD GRIMSDALE.

IV.—LENS

(1) **Whalman, H. F. (Los Angeles).—Dinitrophenol cataract.** *Amer. Jl. Ophthal.*, Vol. XIX, p. 885, 1936.

(1) **Whalman** describes the medical treatment of obesity by the administration of the sodium salt of 2—4 alpha-dinitrophenol.

He reports the ocular findings in 17 patients who developed bilateral cataract as a result of this treatment. Sixteen of these were females and the age incidence was between 25 and 50 the majority

being 25 to 40 years of age. The dose of dinitrophenol received was that which Tainter and his co-workers had used; 100 milligrams daily for one week followed by 200 milligrams daily for several weeks and then a gradual increase until toxic symptoms indicated the advisability of reducing the dose or stopping its administration.

Lens opacities developed during treatment and in some cases several months afterwards. The cataract resembles the complicated type and rapidly becomes mature in from 7 days to 6 months the average being 6 weeks. The earliest ocular signs are an aqueous flare, a spotty, dry, lustreless state of the anterior lens capsule beneath which fine grey cloudy opacities formed. Later irregular pearl-like opacities occurred in the deeper layers of the cortex and a polychromatic lustre became evident in the zone of specular reflection in the posterior cortex. The lens swells and becomes completely disintegrated. The intra-ocular pressure was raised in some cases. Operative treatment by linear extraction was effective in the restoration of vision. The vitreous remained healthy.

H. B. STALLARD.

(2) **Spaeth, E. B. (Philadelphia).—Dinitrophenol cataracts with signs of tetany.** *Amer. Jl. Ophthal.*, Vol. XIX, p. 320, 1936.

(2) **Spaeth** reports the case of a nurse aged 37 years whose vision became affected after taking 3 grains of dinitrophenol daily for 11 months. Within 6 weeks vision was reduced to perception of light and the lenses were converted into sacs containing floating yellow and chalky deposits in which the brownish nucleus had gravitated downwards. The patient became apathetic, morose, mentally unstable and depressed and after operation she developed signs suggestive of parathyroid tetany. She improved on calcium therapy and parathyroid injections.

H. B. STALLARD.

(3) **Bruno (Sassari).—The ciliary insertion and the probable histological significance of the suspensory ligament of the lens. (Sulla inserzione ciliare e sul probabile significato histologico dell fibre delle zonule dello Zinn).** *Ann. di Ottal.*, June, 1936.

(3) **Bruno** finds that the fibres of the zonule are built up of fibrils which spring from the pointed surface of elongated cells lining depressions on the ciliary body.

It can be seen that these fibrils are continuous with filaments which run over the body of the cell to its base.

HAROLD GRIMSDALE.

(3) **Basile (Naples).—The origin of the ring of pigment behind the lens. (Contributo alla conoscenza della genesi dell'anello Pigmentato retrolenticolare).** *Boll. d'Ocul.*, July, 1936.

(4) The appearance of a ring of pigment on the posterior surface of the lens is not common. **Basile** has observed two cases, in one of which it was associated with Krukenberg's spindle. The ring was incomplete; the patient was suffering from early tabes dorsalis. In the second case a successful operation for detachment of the retina was followed by the appearance of an incomplete ring of pigment on the posterior surface of the lens; this ring in the course of a year almost disappeared. The cause of this pigmentation is the disorganisation of the uveal pigment as a result of disease or of surgical interference.

HAROLD GRIMSDALE.

V.—GLAUCOMA

(1) **Ourgaud, Gustave, Sedan, Jean and Roux, Andre (Marseille). —Enlargement of the nasal field in some cases of chronic glaucoma after sclerecto-iridectomy. (Elargissment au champ visuel nasal de divers glaucomateux chroniques apres sclerecto-iridectomie).** *Ann. d'Ocul.*, Vol. CLXXIII, p. 353, 1936.

(1) **Ourgand, Sedan and Roux** claim in conformity with Lagrange that the risk in operation on a chronic glaucomatous eye with a considerably restricted field is usually exaggerated. The loss of the central vision as a sequel to a fistula operation is very rare. The operation will much more likely preserve or enlarge the field, though recovery can be claimed in the majority of the cases only after some years. Five cases are recorded in which Elliot's trephining or Lagrange's sclerectomy have enlarged the field and even improved the central visual acuity.

HUMPHREY NEAME.

(2) **Cappetta and Motolese (Florence).—Glaucoma in young subjects. (Il glaucoma dei giovani).** *Boll. d'Ocul.*, September, 1936.

(2) Though in general, glaucoma is a disease of advanced years, no age is immune from it; occasionally it is met in those who have just reached puberty, and differs greatly in such cases from the infantile form, buphthalmos. **Cappetta and Motolese** give the history of 17 cases which they have observed among the 1,225 cases of glaucoma at the Clinic at Florence during the years

from 1925 to 1934. The youngest was aged 11 years and none was over 39 years; 10 were between 30 and 39 years. Of these 17, 12 were males and 5 females. Juvenile glaucoma is most commonly chronic or prodromic; the authors decide that there is a true prodromic glaucoma, and not merely a prodromal stage of chronic or acute glaucoma.

They point out that many of the patients suffering from juvenile glaucoma are myopic and think that the enlargement of the eye is due to the increased intra-ocular pressure of the disease. As to the aetiology, they find that heredity has considerable importance; they give a tree, after Plocher, which shows 15 cases of glaucoma, mostly juvenile, among 45 individuals. Hereditary syphilis also, they consider of great influence. Of the five females, two had an acute attack; of the men, only one had acute glaucoma. In all cases some form of sclerecto-iridectomy was performed, and in all successfully.

HAROLD GRIMSDALE.

(3) **Santonastaso (Sassari).—The aetiology of hydrophthalmos. (Sull'eziopatogenesi dell'idrottalmo).** *Ann. di Ottal.*, June-July, 1936.

(3) **Santonastaso** has examined 13 cases of hydrophthalmos; 9 cases were bilateral and 9 were males. One eye, of a child whose other eye was normal was removed and examined microscopically. In this case the canal of Schlemm was almost entirely absent; only in a few sections was it possible to see in its place small spaces with thin walls which seemed to represent the canal. The spaces of Fontana were nowhere recognisable. The iris was everywhere thin and atrophic, and pushed backwards. The vessels in some cases had abnormally thick walls. The author holds that the malformation is probably due to hereditary syphilis. He has found evidence of this in a majority of the cases and has suspected it in others in which evidence for one reason or another could not be obtained. The alteration in the vessel walls is, he thinks, specially indicative of some hereditary taint.

HAROLD GRIMSDALE.

(4) **Contino (Messina).—Acute anterior haemorrhagic glaucoma. (Del glaucoma anteriore emorragico).** *Boll. d'Ocul.*, July, 1936.

(4) **Contino** describes under this name a condition in which the anterior chamber is deep, the pupil only slightly dilated, and the iris oedematous and showing bunches of dilated vessels.

Since high tension with a deep anterior chamber indicates a loss of balance between secretion and excretion of the aqueous, and since the vascular condition of the iris may easily give rise to hyphaema, the author thinks the name which he has given to this condition, to be justified.

In these cases an immediate iridectomy will probably be followed by abundant haemorrhage but if mydriatics and vaso-constrictors are used first, until moderate dilatation of the pupil has been secured, an iridectomy will be of great value.

The author states that in the cases observed by him, there was no preceding iridocyclitis, though in the later stages synechiae form. (The condition seems to the reviewer to resemble those cases of thrombosis of a retinal vein which are followed by the development of bunches of dilated vessels on the iris and high tension.)

HAROLD GRIMSDALE.

(5) **Cattaneo (Parma).—Iridocyclitis with high tension. (Le iridocicliti ipertensivi).** *Boll. d'Ocul.*, November, 1936.

(5) **Cattaneo** holds that the various conditions under which tension is raised in iridocyclitis, have not been sufficiently differentiated. He would group them under three heads: (1) Those eyes in which there has been previous high tension, very often unrecognised; (2) Those in which tension rises with the onset of iridocyclitis having been normal before; (3) Those cases in which tension rises, after the formation of synechiae.

He concludes that in the first group, mydriatics are contra-indicated; miotics should be used. In the second group, mydriatics should be pushed, sometimes paracentesis is necessary. In the third group operation is often required, iridectomy or sclerectomy.

HAROLD GRIMSDALE.

VI.—MISCELLANEOUS

(1) **Nordmann, Jean, and Payeur, Pierre (Strasbourg).—A new adaptometer. (Au sujet d'un nouvel adaptometre).** *Ann. d'Ocul.*, Vol. CLXXIII, p. 137, 1936.

(1) **Nordmann and Payeur** state that for a quick routine examination of the light sense a modification of the photographic exposure meter made by Dren in Vienna has proved very useful. The apparatus is a simple device by which a white and a green

transparent disc in a tube can be observed through an ocular with lateral occluders. The other opening of the tube is illuminated by day-light or better by an artificial source of light. The patient covers one eye with his hand. The other eye looks into the tube. The illumination of the discs in the tube is gradually reduced by turning a cylinder which is connected with a diaphragm. The patient has to focus the white disc. The green disc will soon disappear when the cylinder is turned and the aperture of the diaphragm is diminished. Some moments later it will reappear as dark adaptation increases. The illumination is further reduced until no reappearance of the green disc occurs. The degree to which the size of the stop can be reduced within 20 seconds is a measurement of the adaptation. A comparison has to be made with a normal person, *e.g.*, with the surgeon who has been exposed for some minutes to the same illumination. It is advisable to make three examinations after preliminary instruction of the patient.

Controls were made with Nagel's adaptometer. The patients were homatropinised and subjected to a standard illumination before they were examined. The findings of the small adaptometer were confirmed in 100 per cent. of patients with normal and in 96 per cent. of patients with pathological adaptation.

HUMPHREY NEAME.

(2) **Marucci (Pavia).—Myopia after injury. (Quattro casi di miopia traumatica).** *Rass. Ital. d'Ottal.*, May-June, 1936.

(2) Myopia after injury is due to one of several causes; it may be due to spasm of the ciliary muscle; to relaxation of the suspensory ligament; to subluxation of the lens; or to increase of length of the antero-posterior axis of the globe. In most cases the myopia is of low degree, not more than – 2·0 or – 3·0 D. and is rapidly lessened to disappear within a few days. In one of Marucci's cases, however, it was no less than – 10·0 D. In this case a transitory lowering of tension was followed by acute glaucoma for which operation was performed; a month later the vision in that eye without correction was 7/10. The author thinks that in all these cases spasm of the ciliary muscle was an important factor in the production of the myopia assisted in some by subluxation of the lens; the fact that in some instances the myopia increased after the instillation of eserine, points towards spasm of the ciliary muscle. In all of the cases, there was noted mydriasis in part due to paresis of the nerves in part perhaps to laceration of the sphincter as a direct result of the blow.

HAROLD GRIMSDALE.

(3) **Agnello (Syracuse).—Monocular diplopia. (Ulteriore contributo alla diplopia monoculare).** *Rev. Oto.-Neuro. Oftal.*, May, 1936.

(3) **Agnello** gives the history of a case of monocular diplopia in which no peripheral cause was found. The patient, a woman aged 52 years, stated that she always saw two images with the right eye when the left was covered. The image of a candle was seen single up to a distance of 10 inches; beyond this, the images multiplied until they formed a ring round the true; the author found that the right eye also gave multiple images of which one was red and appeared in front of the others; there was no local abnormality to account for the condition. Searching the past history, the author found that she had undergone removal of the ovaries at the age of 40 on account of flooding and that the diplopia had appeared after this; he attributes the symptoms to the disturbance of the general nervous system following the suppression of the function of the ovaries.

HAROLD GRIMSDALE.

(4) **Rosenbaum, J. (Montreal).—A case of malignant exophthalmos.** *Canadian Med. Assoc. Jl.*, January, 1937.

(4) **Rosenbaum** gives a very full report of a case of malignant exophthalmos in a Jewish male subject of 46 years of age. A searching general examination entirely failed to discover the cause. The only physical abnormality discovered was an odd state of affairs in the naso-pharynx. "On each side of the posterior margin of the vomer there was a smooth swelling, apparently hanging down from the anterior sphenoidal wall, projecting into the naso-pharynx, and encroaching on the pharyngeal apices of the Eustachian tubes." X-ray examination showed a soft mass in the naso-pharynx. There was no bony absorption and a biopsy of the tissue gave negative results.

The patient's right cornea became ulcerated from exposure and a Naffziger operation was performed with an ultimate good result.

A month after this major operation had been performed, the patient suddenly developed a post-auricular abscess, which was being opened and drained when the man suddenly became unconscious. This alarming state of affairs persisted for two days. It was attributed to anoxaemia, possibly aggravated by the abnormality in the naso-pharynx. On recovering consciousness, the patient did well, and three months later returned to work. The Naffziger operation consists in decompressing the orbits. " Under avertin and ether a bilateral osteoplastic flap was reflected. The dura was elevated to expose the floor of the anterior cranial fossa

as far back as the lesser wing of the sphenoid. The bone of the floor was removed as widely as possible, unroofing each of the optic canals and carrying the removal laterally and posteriorly as far as possible. The orbital fascia was widely incised and reflected. The optic nerves and globes were exposed. When as wide a decompression as possible had been obtained, the bone flaps were returned to position, but not tied in place. The scalp flaps were closed in two layers."

As soon as the floor of the skull was removed, decompressing the orbits, a little tissue herniated into the openings and continued to bulge through the openings as the bone removal was continued. No definite pathological alterations could be made out. A small piece of muscle was removed from each side for pathological examination.

R. R. J.

(5) **Sena, J. A. (Buenos Aires).—Pigmented multiple congenital cysts of the iris. (Quistes multiples pigmentados congenitos del iris).** *Arch. de Oftal. de Buenos Aires*, Vol. XI, p. 461, 1936.

(5) **Sena** classifies cysts of the iris as traumatic, parasitical and spontaneous. The latter consists of two groups (*a*) congenital and (*b*) acquired; they have also been called idiopathic.

Congenital cysts of the anterior layer of the iris, and cysts of the stroma, usually lie at the angle of the anterior chamber. Their growth causes subjective symptoms of pain, iridocyclitis and glaucoma. The histology of these cysts varies in different cases; the formation is usually thought to be due to a cystoid change in endothelial or epithelial cells, which have been included in the iris during embryonic life.

Spontaneous cysts of the posterior layers of the iris may be due to adherence of the ciliary processes to the posterior layers, forming a cystoid space. Other authors, however, state that these cysts are always inflammatory.

Cysts occuring superficial to the posterior layer of the iris have been called intra-epithelial; if these cysts lie near the angle of the anterior chamber they may not be noticed for some time, but if they develop near the pupillary border they grow into the anterior chamber, and are connected with the pigment epithelium by a broad pedicle.

During development of the embryo, at a certain stage, there normally exists between the layers of iris pigment a small space, and it is thought that the persistence and abnormal development of this gives rise to these cysts.

Another theory is that they are due to the detachment of the posterior pigment epithelial layer from the anterior, or that it is

a local persistance of the ependymal intra-ocular space of the embryo.

These cysts are benign in character, but they are dangerous on account of the production of a secondary glaucoma.

Treatment can be medical or surgical. Cases have been recorded where cysts have disappeared after the use of atropine or eserine, but this is very exceptional. Injection of substances such as tincture of iodine is dangerous, as the lens may be injured. Radiotherapy and electrolysis have shown good results. Iridectomy, removing the affected part of the iris, is the simplest and most effective method of treatment.

The author describes some cases and their mode of treatment by other ophthalmologists.

His own case was that of a girl, aged 12 years, who for some time had been complaining of slight photophobia and diminution of vision. She was a well-developed girl and nothing abnormal was found, except for some pigmented naevi on the skin of the abdomen and the shoulder.

On examination of the eyes, it was found that in the right eye the anterior chamber was deep, and was filled with tiny cysts situated on the pupillary margin, these cysts were dark brown in colour, and much darker than the rest of the iris. It was very difficult to find the pupil except with the slit-lamp. When examined with the slit-lamp the cysts were found to be very distended and transparent. On instillation of atropine the pupil dilated and the exact position of the cysts was seen.

The condition of the left eye was very similar, but the cysts were more numerous.

Nothing else abnormal was found, the visual acuity was 9/10, and was not improved with glasses; the ocular tension in both eyes was 22mm. The author did not consider that operative treatment would be beneficial, and for the moment he is watching the case.

E. E. CASS.

(6) **Ciotola (Naples).—Argyll Roberton pupil, unilateral, a sequel to herpes frontalis. (Sintoma di Argyll Robertson unilaterale consecutivo a zona oftalmico).** *Boll. d'Ocul.*, December, 1936.

(6) **Ciotola** records a case of this rare occurrence. He discusses shortly the various hypotheses of the causation of the Argyll Robertson pupil and concludes that in his case the virus of herpes had attacked some small focus in the brain, perhaps in the posterior commissure.

HAROLD GRIMSDALE.

BOOK NOTICES

A Handbook of Ocular Therapeutics. By SANFORD R. GIFFORD, M.A., M.D., F.A.C.S., Professor of Ophthalmology, Northwestern University Medical School, Chicago. Second Edition. Pp. 341. London: Henry Kimpton. 1937. Price, 18/- net.

This book, dedicated to the memory of the author's distinguished father, Dr. Harold Gifford, is a very valuable addition to ophthalmic literature and is worthy of a place in every ophthalmologist's library. It is seldom possible in the ordinary text-book to devote an amount of space to treatment sufficient to deal with this most important subject exhaustively. Here the author discusses all the well recognized methods of treatment in considerable detail, and most experienced ophthalmic surgeons would agree with almost every statement made and opinion expressed. In addition, all the more recent drugs and modes of treatment, *e.g.*, radium, diathermy, and so on, are discussed, and, what is extremely important, minute directions are given as to their mode of application. Furthermore, the more highly theoretical applications of recent bio-chemical and other researches to the treatment of cataract, sympathetic ophthalmitis, and other specially recalcitrant disease are sufficiently described and adjudicated upon; and if the verdict is usually unfavourable the reader cannot but agree that it is the logical conclusion to the assembled facts.

Opinions will necessarily vary as to different modes of treatment and we are not in agreement with the warm advocacy displayed in the treatment of lacrymal obstruction by probes, nor do we agree that paracentesis should ever be used in the treatment of acute glaucoma. But these are isolated and exceptional items, and, in general, the level-headed exposition of the subject is entirely commendable.

The book is admirably printed and illustrated, and its value is enhanced by short but useful bibliographies, mostly derived from American literature.

Diathermy. By ELKIN P. CUMBERBATCH, M.D., F.R.C.P. Third Edition. Pp. 576, octavo, with frontispiece and 168 illustrations. London: William Heinemann (Medical Books), Limited. 1937. Price, 21s.

So rapid has been the progress in our knowledge of diathermy and diathermo-therapy that the third edition of Dr. Cumberbatch's work has been re-written and very much enlarged. He has had the assistance of nine collaborators who have contributed special chapters. The work is in three parts. Part I gives an introduction to electro-thermic methods, history, physical and electro-technical

principles. Part II deals with medical electro-thermic methods and their uses and Part III deals with the surgical side.

In an ophthalmological journal we are not in a position to criticize any of the general medical or surgical chapters. The section dealing with diathermy in ophthalmology is in the capable hands of Mr. H. B. Stallard, and needs no criticism. He deals with diathermy in the treatment of retinal detachment, neoplasms, contracted socket, trichiasis, cataract extraction and electro-dessication in the treatment of the innocent growths of the eye lids and xanthelasma. In ten pages he has managed to cover the ground fully and in the question of diathermy in retinal detachment he describes the methods of Larsson, Weve and Safar. Notes follow on the results and prognosis after diathermy. The whole is excellent. We feel sure that the volume will be the standard work on this subject in our language.

Wills Hospital Eye Manual for Nurses. By GLADYS E. COLE, R.N., Chief Nurse, Wills Hospital. Pp. 188, illustrations, 97. London and Philadelphia: W. B. Saunders & Co., Limited. 1936. Price, 7s. 6d.

This small manual of ophthalmic nursing will fulfil a useful purpose in augmenting the knowledge of nurses who take up ophthalmic work and it will also afford the general nurse information that will render the handling of ophthalmic cases of greater interest to her. The book is carefully planned, is practical and clearly illustrated.

The reviewer feels that the author could with advantage have made the section on retinal detachment more fully descriptive. Nothing is said about the rationale of the surgical treatment of this disorder and the necessity for the maintenance of correct post-operative posture according to the site of the retinal tear and the drainage of the sub-retinal fluid, absolute immobility of the head and eyes, etc. There are many interesting nursing details to be discussed in connection with the management of retinal detachment which have been omitted. Fig. 73 illustrates detachment of the vitreous and has been incorrectly labelled detachment of the retina. The book is well printed and will afford an admirable ophthalmic guide to nurses.

Practical Orthoptics in the Treatment of Squint. By KEITH LYLE and SYLVIA JACKSON. Pp. 207, illustrations, 63. London: H. K. Lewis & Co. 1937. Price, 12s. 6d.

This book is essentially practical; theoretical and controversial academic matters have been excluded. The authors, one an ophthalmic surgeon and the other an orthoptist, have given an interesting and concise account of the management of a large

orthoptic clinic, the instruments used in orthoptic training and the methods of examining and teaching cases of motor anomalies of the eyes. The book is well planned, the illustrations are clear and readily understood and there is much valuable information given in the tables of the results of treatment.

There is a short chapter dealing with the principles of muscle operations; another chapter is concerned with paralytic squint and there is also an interesting account of ocular torticollis which is admirably illustrated.

The print and production of the book are good. It should serve a useful purpose as a guide which contains much information of practical value both for the ophthalmic surgeon and the orthoptist.

Polychromatic Plates for Colour Sense Examination. By E. B. RABKIN. Pp. 39, plates, 20. State Medical Publishing Board: Kharkof, U.S.S.R. 1936.

The author stresses the importance of colour vision in modern life. The polychromatic plates which he has devised for colour sense examination are the results of special laboratory methods and represent the Russians' first attempt at elaborating their own pigments. The author admits that in this respect there may be some defects and indeed there are. The reproduction of the plates does not come up to the standard which we have in this country and some of these particularly 7, 8, 9, 16 and 17 are somewhat crude. They are produced on poor paper and lack the subtler shades that one finds for instance in Ishihara's plates. Besides numerical figures the author has made use of ciphers and single geometrical figures such as circles, triangles and squares. The explanatory text which accompanies the plates is printed in English and Russian and is a testimony to the careful consideration that Dr. Rabkin has given to the subject.

He describes the method of clinical examination, the type of illumination required, the length of exposure of the plates and has given an example of a record card of the patient's answers.

It will be interesting to give these plates a trial and to compare them with others such as Ishihara's and Stillings.

Tenth Annual Report of the Giza Memorial Ophthalmic Laboratory. Cairo: Schindler's Press. Price, 25 piastres.

The Tenth Annual Report by Dr. Wilson of the work carried on at the Memorial Ophthalmic Laboratory in Egypt fully maintains its former high degree of excellence. There are numerous illustrations, five of which are coloured.

In the statistical report on the routine laboratory work the extraordinary wealth of material is noteworthy. As instances of this are reports on the microscopical examination of 18 malignant tumours

of the limbus, 7 gliomata of the retina, and 5 cases of fly-blown orbit in which Wohlfartia magnifica was found.

Throughout the year trachoma and the acute ophthalmias have been the principal subjects for research. The problem of the acute ophthalmias is more important even than that of trachoma in Egypt. There are in Egypt approximately a million people who are blind in one or both eyes, and in three-quarters of these cases the sight has been lost as a result of acute ophthalmia. There is a clockwork regularity in the epidemics of ophthalmia, and Wilson's explanation of their dependence on the three factors of heat, humidity and flies is of great interest. Wilson is the first to correlate these three factors, which he studies at length in an Appendix to the Report.

In a former Report Wilson described attempts to prevent young children in a typical Egyptian village from becoming infected with trachoma. Further experience has shown that the use of prophylactic drops simply delays the onset of trachoma and perhaps lessens its severity. A few cases, however, developed severe forms of trachoma in spite of daily treatment. Of 42 children who reached the age of two years, all developed trachoma sooner or later. It has also been determined that such treatment cannot effectively control the acute ophthalmias of infancy. The slight advantage to be gained from the use of prophylactic drops is not commensurate with the work entailed. The simple expedient of wearing a veil is probably just as effective as drug treatment, if not more so; but care must be taken to see that the veil is washed from time to time, and that it is worn constantly.

In a few cases Wilson observed the onset of a definite trachoma stage I (Tr. I) with new vessels in the cornea, in which the conjunctiva afterwards returned to normal, leaving no visible traces of the previous existence of trachoma, except the new vessels in the cornea. Two of these cases subsequently had a return of Tr. I, the whole course of events occurring within the first two years of life. There is therefore some justification for diagnosing many of the children that one sees in the better-class schools in Egypt as Tr. IV, although nothing abnormal is found except the abnormal corneal vessels. Wilson has not observed similar appearances in the cornea as the result of simple acute conjunctivitis.

In Egypt the children of the fellaheen are always affected with Koch-Weeks or gonococcal conjunctivitis at a very early age. Usually within the first month of life a slight discharge begins to make its appearance and this may last for a few months before an acute inflammation with much discharge occurs. The age at which an acute attack appears depends largely on the time of the year during which the child is born. A child born in the winter is always later in developing an acute attack than one born in the spring or summer.

Clinical evidence of trachoma may appear before the child has an attack of acute conjunctivitis, but amongst the children of the fellaheen one *never* sees trachoma without there having been previously some Koch-Weeks or gonococcal infection. In the earliest months of life Koch-Weeks conjunctivitis is much more common than gonococcal conjunctivitis.

Chronic Koch-Weeks or gonococcal conjunctivitis undoubtedly produce much papillary hypertrophy, so much so that Tr. I may never be seen. In such cases the disease passes direct to Tr. II*b*, a stage which apart from the corneal signs is indistinguishable from a simple chronic hypertrophic conjunctivitis. A simple chronic ophthalmia, however, can never of itself give rise to genuine trachoma.

There is no doubt that many of the so-called severe forms of trachoma are largely due to a bacterial infection; it is therefore of the greatest importance to continue the use of simple antiseptic measures before undertaking the more drastic forms of treatment.

It is clear that the professional administration of the laboratory matches the admirable building in which it is carried on.

OBITUARY

It is with much regret that we record the death on March 8 of Dr. John Attlee of 65, Grosvenor Street. For many years he had worked regularly as Chief Clinical Assistant at the Royal Westminster Ophthalmic Hospital, and this in spite of the claims of a large general practice.

Attlee was trained at Cambridge and St. Bartholomew's Hospital. At the former he took his B.A. with a 2nd class in the Natural Science Tripos in 1889. He proceeded M.B., B.Ch. in 1892, M.A., 1893 and M.D. in 1895. He entered St. Bartholomew's with a Shuter Scholarship. Among his other appointments may be noted that of Consulting Physician to the Hospital for Consumption, Margaret Street. During the War he replaced the late Devereux Marshall in charge of the ophthalmic department of the Victoria Hospital for Children, Tite Street, In earlier days he had been Ophthalmic House Surgeon to St. Bartholomew's Hospital and Clinical Assistant at Moorfields. Though he did not contribute largely to ophthalmological literature he was the author of several practical papers on general subjects. Dr. Attlee became a member of the Ophthalmological Society in 1895. He had only recently retired from practice. He will be much missed by his old patients and his many friends.

Mr. Elmore Brewerton writes:—

John Attlee showed a keen interest in eyework since his appointment as ophthalmic house surgeon at "Barts." in 1892 under Henry Power and Bowater Vernon. He joined the Ophthalmological Society in 1895 and rarely missed a meeting of that Society, or of the Ophthalmic Section of the Royal Society of Medicine.

He had many interests outside his profession; and was a first-class mechanic and a skilled worker on the lathe; in the basement of his house in Grosvenor Street he had a very fine lathe and hundreds of tools, as well as a forge for tempering metals. On one occasion he obtained the first prize in a competition, given by one of the largest lathe-makers in the country, for the best report on the work done by an amateur on a lathe in the preceding year. This mechanical bent naturally led him to motor mechanics, and in the early days of motoring he was frequently to be seen careering about the country with his wife on a tandem motor quadricycle, accompanied by a noise like the firing of a machine gun. Since those days he was never without a motor car of some sort. He was a good shot and a keen fisherman.

His wife died in the influenza epidemic soon after the War. He leaves one son and one daughter, the former has his father's natural mechanical ability.

NOTES

Death

WE much regret to record the death of Mr. D. J. Wood, our representative in Cape Town, on March 18. We hope to publish a memoir in a later number.

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Royal London Ophthalmic Hospital, Dinner, 1937

THE Annual Dinner of the Royal London Ophthalmic Hospital took place on Thursday, March 11, at the Langham Hotel. Mr. T. Harrison Butler, Consulting Surgeon to the Birmingham and Midland Eye Hospital, presided. The toast of the School was proposed by the Chairman, and Mr. Theodore Luling, the Chairman of the Hospital, and Mr. Charles Goulden, the Dean of the Medical School, replied. The health of the guests was proposed by Mr. R. Affleck Greeves, and Mr. W. Girling Ball, Dean of the Faculty of Medicine of the University of London, replied. Mr. R. Foster Moore proposed the health of the Chairman. The attendance numbered 92.

In responding to the health of the School, the Dean incorporated his report. He said that the School was flourishing and that students had joined the Hospital in larger numbers than previously.

During 1936 one hundred and four new students joined the Hospital, and seventy-four old students continued their attendances. The examination results had been satisfactory: fifty students had been presented for Part I. of the D.O.M.S. and forty had passed, whilst for Part II. of the thirty-nine students presented, thirty-one passed; one student had obtained the F.R.C.S. of Edinburgh.

The Gifford Edmonds Prize had been awarded to Mr. J. Bruce Hamilton of Hobart, Tasmania (an old student and senior resident officer), for his essay on the "Significance of Heredity in Ophthalmology."

Apart from continuous clinical instruction, 623 hours of lectures had been given. Mr. Fincham had delivered a series of lectures on "Modern Ophthalmic Instruments," and Professor Bedson on "Allergy." Six series of demonstrations had been given to students of the Post-graduate College at Hammersmith. On an average twenty-five students attended on each occasion.

Sir Stewart Duke-Elder had resigned from the Hospital, and Sir John Parsons, who had lectured on Physiology since 1919, had also resigned his lectureship. To replace these the School had secured the services of Dr. R. J. Lythgoe, Reader in Physiology of the Special Senses in the University of London. Dr. Russell Brain had retired and in his place Dr. Denis Brinton had been elected to the staff. Mr. Frank Law had joined the staff and undertook the classes in practical surgery. Mr. C. D. Shapland had been appointed Curator and Pathologist. Mr. R. C. Davenport had been appointed sub-Dean.

The School still felt the need of a proper professorial unit in which full-time officers could give more attention to the teaching. Under the present arrangement it was impossible to do more, and recently the help of chief clinical assistants had been obtained to give tutorial classes, and these had been much appreciated.

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London University

WE congratulate Mr. H. L. Eason, Vice-chancellor of the University and medical superintendent of Guy's Hospital, who has been appointed Principal of the University in succession to the late Sir Edwin Dellar.

* * * *

Cours de Perfectionnement, 1937

PROFESSOR TERRIEN announces the annual Cours de Perfectionnement at the Ophthalmological Clinic of the Hôtel-Dieu from May 21 to June 25, 1937. The fee for the course is 300 francs; and the sessions have been arranged in two series—(i) clinical and laboratory, (ii) ocular surgery.

Professor Terrien is assisted by a number of lecturers and demonstrators. Further information can be obtained from Professor Terrien.

Oxford Ophthalmological Congress

ON July 8 there will be a discussion on the "Problem of Myopia," to be opened by Mr. Bishop Harman and Mr. Arnold Sorsby.

The Doyne Memorial lecture, on "Night Blindness in Eye Disease," was to have been given by the late Mr. D. J. Wood.

Papers have been promised by Professor J. Imre of Budapest, Professor Sir Walter Langdon-Brown, Mr. Tudor Thomas, Mr. Chavasse, Dr. Samuels, of New York, Group-Captain Guilfoyle and Wing-Commander Livingston.

On the afternoon of July 8, there will be tea at the Nuffield Institute. There will be demonstrations in the Scientific and Commercial Museums. Further information can be obtained from Mr. F. A. Anderson, 12, St. John's Hill, Shrewsbury.

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Gifford Edmonds Prize, 1936

THIS prize has been awarded to Mr. J. Bruce Hamilton, of Hobart, Tasmania, for his essay on "The Significance of Heredity in Ophthalmology."

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International Congress of Ophthalmology

ON the occasion of the International Congress of Ophthalmology to be held at Cairo from December 8 to 15, 1937, several trips in the Orient have been organized under the auspices of the International Council of Ophthalmology leaving Marseilles on December 3, 1937.

The first trip comprises 1st class passage from Marseilles to Alexandria by the de luxe steamer "Mariette Pacha" (15,000 tons) belonging to the Messageries Maritime line, lunch and dinner on December 7—the date of arrival at Alexandria—1st class railway journey from Alexandria to Cairo and return, conveyances from the railway stations to hotels and vice versa, the stay at a first-class hotel during the sitting of the Congress (bed and breakfast only), all meals on December 16 and 17, arrival at Marseilles on December 21. Price: 1,620 Belgas.

The second trip comprises the services indicated above up to December 16, with, besides, a visit to Upper Egypt (Luxor, the Valley of the Kings, Assouan, all expenses included with sleeping-car), the return to be effected by the S.S. "Champollion" arriving at Marseilles on December 28. Price: 2,350 Belgas.

The third trip will be the same as the second with an additional visit to Palestine and Syria, and return to Marseilles on January 4, 1938. Price: 3,400 Belgas.

And lastly, the fourth trip which will be identical with the preceding except that the visit to Syria will be more complete (Homs, Hama, Antioch, Latakia, etc.) and return to Marseilles *via*

the Northern Mediterranean (Rhodes, Smyrna, Stamboul, the Piræus, Athens, Naples). Price: 3,975 Belgas.

The programme giving full particulars of these several trips will be sent free of charge on request addressed to the Bureau des Croisieres et Voyages Medicaux, 29, Boulevard Adolphe Max, Bruxelles (Belgium). Telegraphic address: Belgfranav (Brussels).

Those desiring to take part in any of these several trips will do well to apply as early as possible as the best cabin accommodation will naturally go to the first applicants.

Doctors who are not ophthalmologists may, up to the limit of accommodation available, register their names for any of the above trips, so long as their applications are approved by the International Council of Ophthalmology, though naturally they can take no part in the special work of the Congress.

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Lectures

UNIVERSITY OF GLASGOW. Department of Ophthalmology. A short course of lectures on "Leading Symptoms in Ophthalmology."

We regret that we received the notice of this course of lectures too late to inform our readers of those held in April.

Tuesday, April 20. Professor A. J. Ballantyne on "Visual Defects of Gradual and Sudden Onset."

Tuesday, April 27. Dr. John Marshall on "Defects in the Visual Fields."

have already been given. The remainder will be delivered on the following dates:—

Tuesday, May 4. Dr. I. Chesar Michaelson on "Headache and Asthenopia."

Tuesday, May 11. Dr. John Marshall on "Double Vision."

Tuesday, May 18. Professor A. J. Ballantyne on "Entopic and Psychological Phenomena."

The lectures will be given at 5 p.m. in the Tennent Memorial Building, Church Street. All interested are cordially invited.

FUTURE ARRANGEMENTS

1937

June 4.—Midland Ophthalmological Society, at Shrewsbury Eye Hospital.

June 11.—Royal Society of Medicine; Section of Ophthalmology (Annual).

July 8-10.—Oxford Ophthalmological Congress, at Oxford.

October 1.—Midland Ophthalmological Society, at the Eye Hospital, Birmingham (Annual Meeting).

December 7.—Midland Ophthalmological Society, at Birmingham Eye Hospital (Middlemore Lecture).

CONTEMPORARY OPHTHALMIC LITERATURE

American Journal of Ophthalmology. *March, 1937.*

BEDELL. Sudden occlusion of retinal arteries.
WRIGHT. Lectures on cataract.
WAGENER and WEIR. Ocular lesions associated with post-operative and gestational nutritional deficiency.
LUDVIGH. The gradient of retinal illumination and its practical significance.
BERENS. Surgical results in 223 cases of heterotropia.
FINE and BARKAN. Essential progressive iris atrophy.
OLSHO. Thin lenses and bifocals for high myopia.
FERREE and RAND. Requirements of good desk lighting.
BERENS. Enucleation with implantation of foreign substances into Tenon's capsule.
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